

Means for Solving the Problem

[0006] In order to achieve the above object, a steam cooker according to the present invention comprises: a cooking chamber in which foods are put; an external circulation path for blowing gas sucked from the cooking chamber via a suction port into the cooking chamber via a blowhole so that the gas strikes the foods in the cooking chamber; a blower for generating gas current traveling from the suction port to the blowhole in the external circulation path; and a steam generator for supplying steam to the gas passing through the external circulation path. Herein, the external circulation path is provided with a steam ejector in a position downstream of the blower for sucking steam generated by the steam generator.

[0007] With this configuration, the gas in the cooking chamber circulates via the external circulation path and steam is supplied in the external circulation path in the circulation process. Consequently, different from the case of continuously blowing steam in one-way, without requiring the steam generator of high performance, the steam cooker having excellent energy efficiency and suitable for home use can be achieved. Since forced circulation gas current which is sucked from the cooking chamber into the suction port and then blown into the cooking chamber via the blowhole is generated, heating of the object to be heated is accelerated. Further, since the external circulation path sucks steam generated by the steam generator by an ejector provided in a position downstream of the blower, the steam can be promptly sucked without applying pressure on the steam generator, and the steam can mingle with gas current efficiently.

[0008] In the above steam cooker according to the present invention, the external circulation path is provided with a bypass for the gas to bypass the steam ejector.

- [0009] With this configuration, pressure loss of the circulation system is reduced, so that the fan can be driven efficiently and the jet force of steam also is strengthened.
- [0010] In the above steam cooker according to the present invention, the external circulation path is constructed with pipes with circular cross section.
- [0011] Being constructed with pipes of circular cross-section, the surface area of the external circulation path is smaller than a duct having a rectangular cross-section. Consequently, heat dissipation from the external circulation path is reduced, and the energy efficiency improves.
- [0012] In the above steam cooker according to the present invention, the blower includes a centrifugal fan.
- [0013] With this configuration, as compared with the case of using a propeller fan, the flow velocity of gas current blown from the blower can be made higher. Thus, the diameter of the pipe constructing the external circulation path can be decreased. By decreasing the diameter of the pipe, the surface area of the external circulation path is narrowed so that the heat dissipation can be reduced and energy efficiency can be further improved. Since the centrifugal fan can generate higher pressure as compared with a propeller fan, the force of jet from the blowhole can be increased. As a result, the steam jet is elongated, and the foods can be heated intensely.
- [0014] In the above steam cooker according to the present invention, a motor for driving the centrifugal fan is a direct current motor.
- [0015] With this configuration, the centrifugal fan can be rotated at high speed and gas current of extremely high flow velocity can be obtained.

Advantages of the Invention

[0016] The steam cooker according to the present invention comprises: a cooking chamber in which foods are put; an external circulation path for blowing gas sucked from the cooking chamber via a suction port into the cooking chamber via a blowhole so that the gas strikes the foods in the cooking chamber; a blower for generating gas current traveling from the suction port to the blowhole in the external circulation path; and a steam generator for supplying steam to the gas passing through the external circulation path, wherein the external circulation path is provided with a steam ejector in a position downstream of the blower for sucking steam generated by the steam generator, and the gas in the cooking chamber circulates via the external circulation path and steam is supplied in the external circulation path in the circulation process. Therefore, different from the case of continuously blowing steam in one-way, without requiring the steam generator of high performance, the steam cooker having excellent energy efficiency and suitable for home use can be achieved. Since forced circulation gas current which is sucked by a suction port from the cooking chamber and then blown into the cooking chamber via the blowhole is generated, heating of the object to be heated is accelerated. Further, since the external circulation path sucks steam generated by the steam generator by an ejector provided in a position downstream of the blower, the steam can be promptly sucked without applying pressure on the steam generator, and the steam can mingle with gas current efficiently.